TECHNICAL DOCUMENTATION FOR PACKAGING COMPLIANCE

Document Reference No.	SP-PPWR-TD-002
Version	1.0
Effective Date	August 12, 2026
Regulatory Basis	Regulation (EU) 2025/40 (PPWR) Annex VII

In Accordance with Regulation (EU) 2025/40 (Packaging and Packaging Waste Regulation)

- **Product / Packaging Commercial Name:** Multi-layered Packaging System for NBR Gloves
- **Packaging System Description:** The NBR gloves are packed individually in retail PP bags, grouped into PP inner bags, packed into an PE odor-barrier liner, and loaded into corrugated master cartons.
- **Applicable Product Model**: The PKG-ARJ packaging family list is provided in Appendix A.
- **Manufacturer**: SUN PLASTICS INDUSTRIAL CO., LTD
- **Manufacturer Address**: LOT L. 02-04-06A, ROAD 10, TAN THUAN EXPORT PROCESSING ZONE, TAN THUAN WARD, HCM CITY, VIETNAM
- **EU Importer**: Renmark Development Inc.

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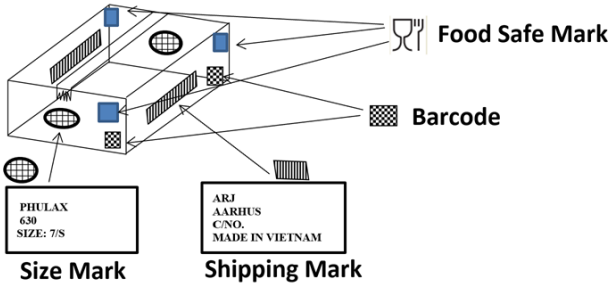
Chapter 2: Product & Packaging Specifications

2.1 General Description & Intended Use

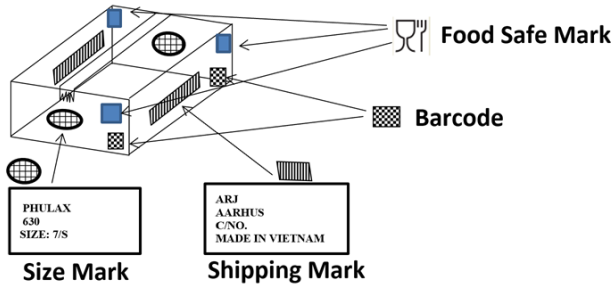
- **Purpose:** This packaging system is designed to protect, transport, and display NBR Gloves.
- **Packaging Design Layout:**

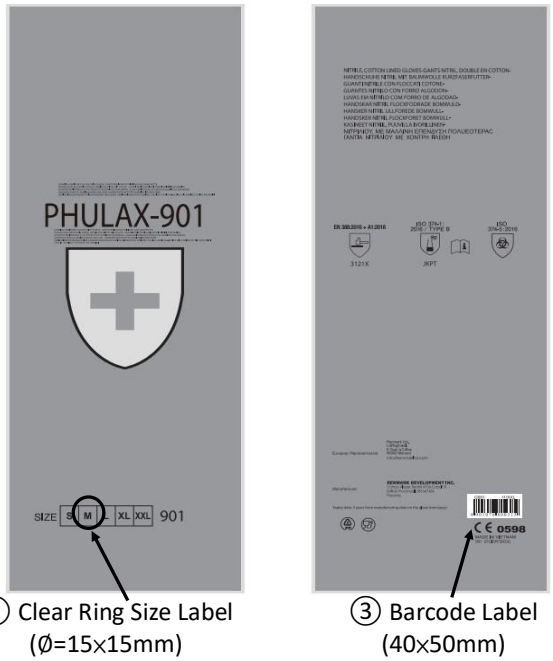
ARJ 630



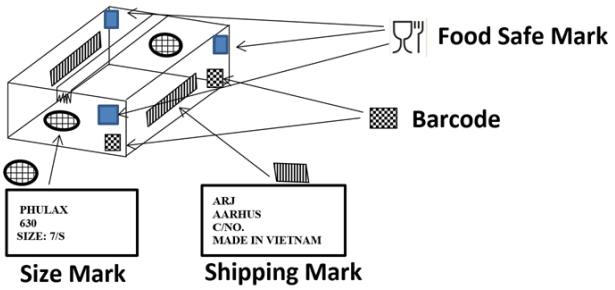


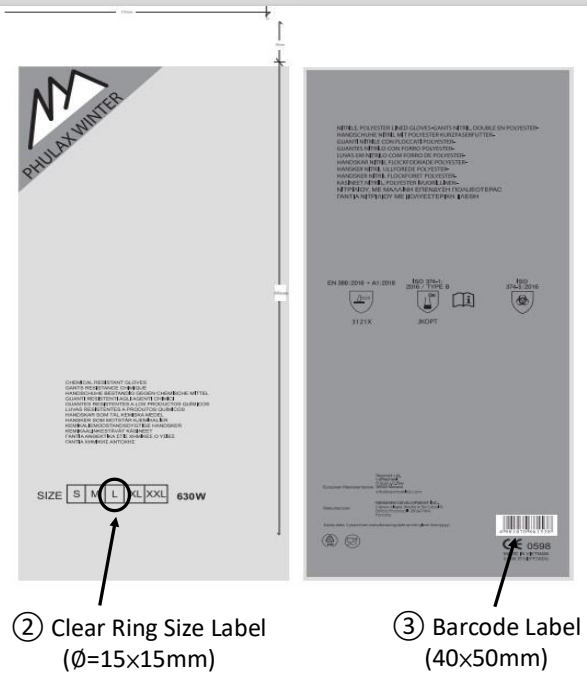
ARJ 680



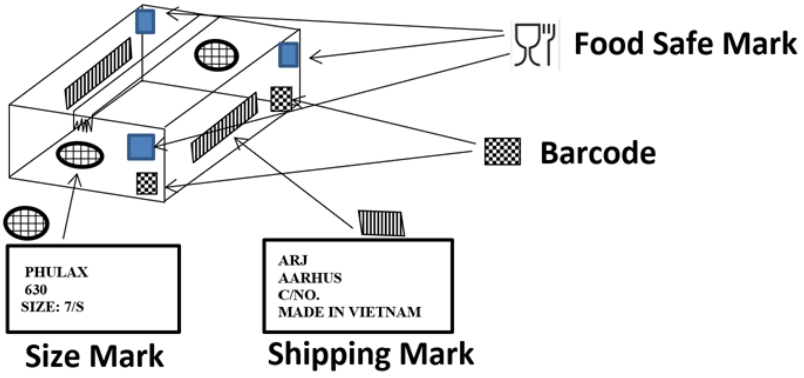


ARJ 630W





ARJ 680W



2.2 Bill of Materials (BOM)

The total packaging system consists of the following components:

ARJ 630						
Item	**Component Name**	**Packaging Level**	**Net Weight (g)**	**Weight Ratio (%)**	**Material Composition**	**PPWR Compliance**
①	Packaging Bag (155×380mm)	Primary	5.70	94.21%	OPP+CPP (PP 05)	**Mono-material.**
②	Clear Ring Size Label (Ø=15×15mm)	Primary	0.05	0.83%	PET (PET 01)	Wash-off adhesive. (<5% weight threshold)
③	Barcode Label (40×50mm)	Primary	0.30	4.96%	Paper (PAP 22)	Wash-off adhesive. (<5% weight threshold)
④	Grouped Bag (340×350mm)	Secondary	16.70	96.53%	PP (PP 05)	**Mono-material**
⑤	Barcode Label (50×60mm)	Secondary	0.50	2.89%	Paper (PAP 22)	Wash-off adhesive. (<5% weight threshold)
⑥	Sealing Tape	Secondary	0.10	0.58%	OPP (PP 05)	Wash-off adhesive. (<5% weight threshold)
⑦	Odor-Barrier Liner (550×750mm)	Secondary	48.70	100%	LDPE (PE-LD 04)	70% LDPE + 25% Nylon
⑧	Master Carton (600×350×340mm)	Tertiary	1400.00	99.00%	Corrugated Paper (PAP 20)	**Mono-material.**
⑨	Shipping Mark Label (148×210mm)	Tertiary	4.40 (2.20×2)	0.31%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑩	Barcode Label (50×60mm)	Tertiary	1.00 (0.50×2)	0.07%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑪	Size Mark Label (148×210mm)	Tertiary	4.40 (2.20×2)	0.31%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑫	Food Safe Mark Label (60×60mm)	Tertiary	1.80 (0.60×3)	0.13%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑬	Sealing Tape	Tertiary	2.60	0.18%	OPP (PP 05)	Wash-off adhesive. (<5% weight threshold)

Note: Packaging levels are defined as Primary (direct product contact/retail packaging), Secondary (grouped packaging), and Tertiary (transport packaging).

ARJ 680 (901)						
Item	**Component Name**	**Packaging Level**	**Net Weight (g)**	**Weight Ratio (%)**	**Material Composition**	**PPWR Compliance**
①	Packaging Bag (170×440mm)	Primary	7.10	95.30%	OPP+CPP (PP 05)	**Mono-material.**
②	Clear Ring Size Label (Ø=15×15mm)	Primary	0.05	0.67%	PET (PET 01)	Wash-off adhesive. (<5% weight threshold)
③	Barcode Label (40×50mm)	Primary	0.30	4.03%	Paper (PAP 22)	Wash-off adhesive. (<5% weight threshold)
④	Grouped Bag (340×500mm)	Secondary	24.10	97.57%	PP (PP 05)	**Mono-material**
⑤	Barcode Label (50×60mm)	Secondary	0.50	2.02%	Paper (PAP 22)	Wash-off adhesive. (<5% weight threshold)
⑥	Sealing Tape	Secondary	0.10	0.41%	OPP (PP 05)	Wash-off adhesive. (<5% weight threshold)
⑦	Odor-Barrier Liner (650×850mm)	Secondary	64.80	100%	LDPE (PE-LD 04)	70% LDPE + 25% Nylon
⑧	Master Carton (610×365×390mm)	Tertiary	1300.00	98.92%	Corrugated Paper (PAP 20)	**Mono-material.**
⑨	Shipping Mark Label (148×210mm)	Tertiary	4.40 (2.20×2)	0.33%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑩	Barcode Label (50×60mm)	Tertiary	1.00 (0.50×2)	0.08%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑪	Size Mark Label (148×210mm)	Tertiary	4.40 (2.20×2)	0.33%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑫	Food Safe Mark Label (60×60mm)	Tertiary	1.80 (0.60×3)	0.14%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑬	Sealing Tape	Tertiary	2.60	0.20%	OPP (PP 05)	Wash-off adhesive. (<5% weight threshold)

Note: Packaging levels are defined as Primary (direct product contact/retail packaging), Secondary (grouped packaging), and Tertiary (transport packaging).

ARJ 630W						
Item	**Component Name**	**Packaging Level**	**Net Weight (g)**	**Weight Ratio (%)**	**Material Composition**	**PPWR Compliance**
①	Packaging Bag (175×380mm)	Primary	5.80	94.31%	OPP+CPP (PP 05)	**Mono-material.**
②	Clear Ring Size Label (Ø=15×15mm)	Primary	0.05	0.81%	PET (PET 01)	Wash-off adhesive. (<5% weight threshold)
③	Barcode Label (40×50mm)	Primary	0.30	4.88%	Paper (PAP 22)	Wash-off adhesive. (<5% weight threshold)
④	Grouped Bag (340×350mm)	Secondary	16.70	96.53%	PP (PP 05)	**Mono-material**
⑤	Barcode Label (50×60mm)	Secondary	0.50	2.89%	Paper (PAP 22)	Wash-off adhesive. (<5% weight threshold)
⑥	Sealing Tape	Secondary	0.10	0.58%	OPP (PP 05)	Wash-off adhesive. (<5% weight threshold)
⑦	Odor-Barrier Liner (650×850mm)	Secondary	64.80	100%	LDPE (PE-LD 04)	70% LDPE + 25% Nylon
⑧	Master Carton (460×312×420mm)	Tertiary	1000.00	98.60%	Corrugated Paper (PAP 20)	**Mono-material.**
⑨	Shipping Mark Label (148×210mm)	Tertiary	4.40 (2.20×2)	0.43%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑩	Barcode Label (50×60mm)	Tertiary	1.00 (0.50×2)	0.10%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑪	Size Mark Label (148×210mm)	Tertiary	4.40 (2.20×2)	0.43%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑫	Food Safe Mark Label (60×60mm)	Tertiary	1.80 (0.60×3)	0.18%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑬	Sealing Tape	Tertiary	2.60	0.26%	OPP (PP 05)	Wash-off adhesive. (<5% weight threshold)

Note: Packaging levels are defined as Primary (direct product contact/retail packaging), Secondary (grouped packaging), and Tertiary (transport packaging).

ARJ 680W						
Item	**Component Name**	**Packaging Level**	**Net Weight (g)**	**Weight Ratio (%)**	**Material Composition**	**PPWR Compliance**
①	Packaging Bag (168×437mm)	Primary	7.80	96.30%	OPP+CPP (PP 05)	**Mono-material.**
②	Barcode Label (40×50mm)	Primary	0.30	3.70%	Paper (PAP 22)	Wash-off adhesive. (<5% weight threshold)
③	Grouped Bag (340×500mm)	Secondary	24.10	97.57%	PP (PP 05)	**Mono-material**
④	Barcode Label (50×60mm)	Secondary	0.50	2.02%	Paper (PAP 22)	Wash-off adhesive. (<5% weight threshold)
⑤	Sealing Tape	Secondary	0.10	0.41%	OPP (PP 05)	Wash-off adhesive. (<5% weight threshold)
⑥	Odor-Barrier Liner (650×850mm)	Secondary	64.80	100%	LDPE (PE-LD 04)	70% LDPE + 25% Nylon
⑦	Master Carton (610×365×430mm)	Tertiary	1400.00	99.00%	Corrugated Paper (PAP 20)	**Mono-material.**
⑧	Shipping Mark Label (148×210mm)	Tertiary	4.40 (2.20×2)	0.31%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑨	Barcode Label (50×60mm)	Tertiary	1.00 (0.50×2)	0.07%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑩	Size Mark Label (148×210mm)	Tertiary	4.40 (2.20×2)	0.31%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑪	Food Safe Mark Label (60×60mm)	Tertiary	1.80 (0.60×3)	0.13%	Paper (PAP 22)	**Mono-material.** (<5% weight threshold)
⑬	Sealing Tape	Tertiary	2.60	0.18%	OPP (PP 05)	Wash-off adhesive. (<5% weight threshold)

Note: Packaging levels are defined as Primary (direct product contact/retail packaging), Secondary (grouped packaging), and Tertiary (transport packaging).

Chapter 3: PPWR Essential Requirements Assessment

3.1 Heavy Metals & Substances of Concern

- **Compliance with Heavy Metal Limits (PPWR Article 5):**
  Based on comprehensive testing data, the sum of concentration levels of Lead (Pb), Cadmium (Cd), Mercury (Hg), and Hexavalent Chromium (Cr^{6+}) across all individual packaging layers and components (including corrugated cardboard, PP plastics, labels, and applied inks) is strictly maintained below 100 mg/kg (ppm) as mandated by the EU Packaging and Packaging Waste Regulation (PPWR).

- **Ink Safety & Chemical Substance Control:**
  All printing inks used on the paper and plastic substrates are highly regulated and formulated without the intentional addition of mineral oils (MOSH/MOAH), ensuring compliance with EU regional market restrictions (e.g., French AGEC decree). Furthermore, no Per- and polyfluoroalkyl substances (PFAS) or synthetic polymer microplastics have been intentionally added to the PP and paper structures. The entire packaging configuration fully complies with the latest REACH Regulation and RoHS Directive.

3.2 Design for Recycling (DfR) Assessment (PPWR Article 6)

Based on the EU PPWR Design for Recycling (DfR) criteria, the packaging achieves the following:

- **Mono-materiality:** The retail bag is using 100% single-polymer PP without any non-separable laminated layers, while the product inside is safely protected during the B2B logistics stage by a 100% PP inner bag that can be effortlessly separated by the intermediary customer prior to the consumer retail phase.

- **Expected Recyclability Grade:** The estimated grade is B for primary packaging, D for secondary packaging, and A for tertiary packaging. The materials utilized possess established recycling pathways within the existing EU collection infrastructure.

3.3 Minimization & Void Space Analysis (PPWR Article 10 & 11)

To satisfy PPWR restrictions against excessive packaging and empty space ratios, the following design optimizations have been applied:

- **Empty Space Ratio**: The product volume occupies 90% of the internal packaging volume. The empty space ratio is 10%, which is well below the regulatory limit.

Chapter 4: Appendices (Supporting Evidence Dossier)

- **Appendix A: List of Packaging Family and Applicable Product Models**
  - *[Packaging Family ID: PKG-ARJ]*
- **Appendix B: Chemical & Heavy Metal Compliance Test Reports**
  - *[SGS Test Report, Report No: VNHL2504009862EE_PP Primary Bag_ Heavy Metal]*
  - *[SGS Test Report, Report No: VNHL2606014108HG_PP Primary Bag_ PFAS]*
  - *[SGS Test Report, Report No: ETR26100831_PP Bag Ink_ Heavy Metal]*
  - *[QUATEST 3 Test Report, Report No: Q3264028146_PP Secondary Bag_ Heavy Metal]*
  - *[SGS Test Report, Report No: VNHL2605011453HG_PP Secondary Bag_ PFAS]*
  - *[SGS Test Report, Report No: ETR25605344_ PE Odor-Barrier Liner_ Heavy Metal]*
  - *[SGS Test Report, Report No: HTF25A00363_ PE Odor-Barrier Liner_ PFAS]*
  - *[SGS Test Report, Report No: VNHL2607018269HG_Paper Label_ Heavy Matel]*
  - *[SGS Test Report, Report No: VNHL2607018268HG_PET Ring Label_ Heavy Metal]*
  - *[SGS Test Report, Report No: VNHL2607018266HG_PET Food Safety Mark Label_ Heavy Metal]*
  - *[SGS Test Report, Report No: ETR25400056_OPP Tape_ Heavy Metal]*
  - *[SGS Test Report, Report No: VNHL2505013754EE_Corrugated Medium Paper_ Heavy Matel, PFAS]*
  - *[SGS Test Report, Report No: VNHL2505013752EE_Liner Board_ Heavy Matel, PFAS]*
- **Appendix C: Technical Material Specification Sheets**
  - *[DoC provided by material suppliers_ Doc. No: SP-PPWR-DOC-S01, S02_ PP Primary Bag]*
  - *[DoC provided by material suppliers_ Doc. No: SP-PPWR-DOC-S05 _ PP Secondary Bag]*
  - *[DoC provided by material suppliers_ Doc. No: SP-PPWR-DOC-S06 _ PE Odor-Barrier Liner]*
  - *[DoC provided by material suppliers _ Doc. No: SP-PPWR-DOC-S07_ Master Carton]*
  - *[DoC provided by material suppliers _ Doc. No: SP-PPWR-DOC-S09_ PET Label]*
  - *[DoC provided by material suppliers _ Doc. No: SP-PPWR-DOC-S10_ Paper Label]*
  - *[DoC provided by material suppliers _ Doc. No: FG-PPWR-DOC-S12_ OPP Tape]*
  - *[PFAS-Free DoC provided by the suppliers _ Doc. No: TD202620027_ PP Bag Ink]*

Appendix A: List of Packaging Family and Applicable Product Models

- **Packaging Family ID:** PKG-ARJ
- **Packaging Description:** Multi-layered Packaging System for NBR Gloves.

Glove Model	PP Bags / Grouped Bag	Grouped Bags / Cartons	Total (pairs)
ARJ 630	10	12	120
ARJ 680(901)	6		72
ARJ 630W	5		60
ARJ 680W	6		72

Packaging Family Matrix

Product SKU	ARJ 630 7/S	ARJ 630 8/M	ARJ 630 9/L	ARJ 630 10/XL	ARJ 630 11/XXL
Primary Packaging Part No.	POLYBAG PHULAX 630 RENMARK CE0598				
Barcode	4901070861323	4901070751730	4901070751747	4901070751754	4901070861316
Secondary Packaging Part No.	PP 34*35				
Barcode	14901070861320	14901070751737	14901070751744	14901070751751	14901070861313
Tertiary Packaging Part No.	BOX NBR630 EU NOPRINT				
Barcode	24901070861327	24901070751734	24901070751741	24901070751758	24901070861310

Product SKU	ARJ 680 7/S	ARJ 680 8/M	ARJ 680 9/L	ARJ 680 10/XL	ARJ 680 11/XXL
Primary Packaging Part No.	POLYBAG PHULAX 680 RENMARK CE0598				
Barcode	4901070800148	4901070800155	4901070800162	4901070800179	4901070800186
Secondary Packaging Part No.	PP 34*50				
Barcode	14901070800145	14901070800152	14901070800169	14901070800176	14901070800183
Tertiary Packaging Part No.	BOX NBR680 EU NOPRINT				
Barcode	24901070800142	24901070800159	24901070800166	24901070800173	24901070800180

Product SKU	ARJ 630W 7/S	ARJ 630W 8/M	ARJ 630W 9/L	ARJ 630W 10/XL	ARJ 630W 11/XXL	ARJ 630W 12/2LW
Primary Packaging Part No.	**POLYBAG PHULAX 630W RENMARK CE0598**					
Barcode	4901070861514	4901070861521	4901070861538	4901070861545	4901070861552	4901070861736
Secondary Packaging Part No.	**PP 34*35**					
Barcode	14901070861511	14901070861528	14901070861535	14901070861542	14901070861559	14901070861733
Tertiary Packaging Part No.	**BOX NBR630W EU NOPRINT**					
Barcode	24901070861518	24901070861525	24901070861532	24901070861549	24901070861556	24901070861730

Product SKU	ARJ 680W 7/S	ARJ 680W 8/M	ARJ 680W 9/L	ARJ 680W 10/XL	ARJ 680W 11/XXL
Primary Packaging Part No.	**POLYBAG 680 NOPRINT**				
Barcode	4901070800278	4901070800285	4901070800292	4901070800308	4901070800315
Secondary Packaging Part No.	**PP 34*50**				
Barcode	14901070800275	14901070800282	14901070800299	14901070800305	14901070800312
Tertiary Packaging Part No.	**BOX NBR680W EU NOPRINT**				
Barcode	24901070800272	24901070800289	24901070800296	24901070800302	24901070800319

NOTE: To optimize packaging inventory, a shared-bag strategy is applied across all models: each model uses a single shared bag for all of its sizes. Clear labels are applied to identify the specific size. For scanning and tracking, corresponding barcode labels are affixed to the main bag, the inner bag, and the outer carton. The Carton No. on the outer carton changes per order, all other packaging components remain identical.